

## Freeform Search

---

<b>Database:</b>	<div style="border: 1px solid black; padding: 2px;">         US Pre-Grant Publication Full-Text Database          US Patents Full-Text Database          US OCR Full-Text Database          EPO Abstracts Database          JPO Abstracts Database          Derwent World Patents Index          IBM Technical Disclosure Bulletins       </div>
<b>Term:</b>	<div style="border: 1px solid black; padding: 2px;">         112 and e-mail\$2       </div>
<b>Display:</b>	<div style="border: 1px solid black; padding: 2px;">         10 Documents in <u>Display Format:</u> <span style="border: 1px solid black; padding: 0 5px;">-</span> Starting with Number <span style="border: 1px solid black; padding: 0 5px;">1</span> </div>
<b>Generate:</b> <input type="radio"/> Hit List <input checked="" type="radio"/> Hit Count <input type="radio"/> Side by Side <input type="radio"/> Image	

---

Search
Clear
Interrupt

---

### Search History

---

**DATE:** Wednesday, May 26, 2004    [Printable Copy](#)    [Create Case](#)

<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
side by side			
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L13</u>	112 and e-mail\$2	6	<u>L13</u>
<u>L12</u>	stor\$7 near7 paramete\$2 and compar\$6 near4 paramete\$3 and information adj5 content and content near8 identical	10	<u>L12</u>
<u>L11</u>	18 and (e-mail\$2 or mail\$5)	9	<u>L11</u>
<u>L10</u>	18 and e-mail or mail\$5	157174	<u>L10</u>
<u>L9</u>	L8 and content near8 identical	7	<u>L9</u>
<u>L8</u>	14 and compar\$8 near7 paramete\$2	40	<u>L8</u>
<u>L7</u>	L6 and equal	4	<u>L7</u>
<u>L6</u>	L5 and internet	6	<u>L6</u>
<u>L5</u>	L4 and electron\$5 near9 mail	6	<u>L5</u>
<u>L4</u>	L3 and identical	41	<u>L4</u>
<u>L3</u>	L1 and stor\$8 near8 information and conten\$2	119	<u>L3</u>
<u>L2</u>	L1 and stor\$8 near8 information near8 conten\$2	1981445	<u>L2</u>
<u>L1</u>	paramete\$2 near8 information near5 content and compar\$5 near8 paramete\$2	179	<u>L1</u>

**WEST**

Generate Collection

Print

L2: Entry 55 of 62

File: USPT

US-PAT-NO: 5758354

DOCUMENT-IDENTIFIER: US 5758354 A

TITLE: Application independent e-mail synchronization

DATE-ISSUED: May 26, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huang; Chu-Yi	Beaverton	OR		
Tso; Michael Man-Hak	Hillsboro	OR		

US-CL-CURRENT: 707/201; 709/100, 709/106, 714/20

## CLAIMS:

What is claimed is:

1. An apparatus for synchronization of a first set of mail with a second set of mail at a mail message or folder level, said apparatus comprising:

a memory which contains,

a pseudo unique identification generator generating an identification for each said mail message or folder,

an event log generator generating an event for an event log for each said mail message or folder with said identification, said event log generator coupled to said pseudo unique identification generator,

a synchronization mechanism making said first set of mail and said second set of mail equivalent and generating the same synchronization results regardless of whether one or both of said first and second sets of mail are modified prior to synchronization, said synchronization mechanism coupled to said event log generator; and

a processor coupled to said memory, said processor running said event log generator, said pseudo unique identification generator and said synchronization mechanism.

2. The apparatus of claim 1 wherein said synchronization mechanism comprises a change detection mechanism for generating a change list for said first and second sets of mail, said change list listing the changes made at a mail message or folder level to said first and second sets of mail.

3. The apparatus of claim 1 wherein said change detection mechanism further comprises an error correction mechanism for identifying duplicate entries in said first and second set of mail and mark said entries to indicate duplicate status.

4. The apparatus of claim 1 further comprising a change existing mail mechanism

coupled to said error correction mechanism said change existing mail mechanism for correctly identifying a mail message or folder to update or delete without requiring said mail message or folder in said first and second sets of mail to contain system assigned unique identifiers.

5. An apparatus for synchronization of a first set of mail with a second set of mail at a mail message or folder level, said apparatus comprising:

means for containing,

means for generating a change list for said first and second sets of mail, said change list listing the changes made at a mail message or folder level to said first and second sets of mail, and

means for synchronizing said first set of mail and said second set of mail by using the information in said change list generated by said change detection mechanism, said means for synchronizing producing the same synchronization results regardless of whether one or both of said first and second sets of mail are modified prior to synchronization said means for synchronizing coupled to said means for generating; and

means for running said means for generating and said means for synchronizing, said means for running coupled to said means for containing.

6. The apparatus of claim 5 wherein said means for generating further comprises:

first means for identifying whether a mail message or folder in a given mail box is a duplicate of a corresponding mail message or folder in a modified mail box by using the contents of individual attributes in said mail message or folder; and

second means for identifying said duplicate which was not identified by said first means for identifying.

7. The apparatus of claim 5 further comprising means for correctly identifying a mail message or folder to update or delete without requiring said mail message or folder in said first and second set of mail to contain system assigned unique identifiers.

8. A computer system for synchronization of a first set of mail with a second set of mail at a message or folder level, said system comprising:

a memory which contains,

a change detection mechanism generating a change list for said first and second sets of mail, said change list listing the changes made at a mail message or folder level to said first and second sets of mail, and

a synchronization mechanism making said first set of mail and said second set of mail equivalent by using the information in said change list generated by said change detection mechanism, said synchronization mechanism producing the same synchronization results regardless of whether one or both of said first and second sets of mail are modified prior to synchronization, said synchronization mechanism coupled to said change detection mechanism; and

a processor for running said change detection mechanism and said synchronization mechanism, said processor coupled to said memory.

9. The system of claim 8 wherein said change detection mechanism further comprises:

an error correction mechanism for identifying whether a mail message or folder in a given mail box is a duplicate of a corresponding mail message or folder in a modified mail box by using the contents of individual attributes of said mail message or folder.

10. The system of claim 8 wherein said synchronization mechanism further comprises a change existing mail mechanism coupled to said error correction mechanism, said change existing mail mechanism for correctly identifying a mail message or folder to update or delete without requiring said mail message or folder in said first and second set of mail to contain system assigned unique identifiers.

11. A computer system for synchronization of a first set of mail with a second set of mail at a mail message or folder level, said system comprising:

means for containing,

means for generating a change list for said first and second sets of mail, said change list listing the changes made at a mail message or folder level to said first and second sets of mail, and

means for synchronizing said first set of mail and said second set of mail by using the information in said change list generated by said means for generating, said means for synchronizing producing the same synchronization results regardless of whether one or both of said first and second sets of mail are modified prior to synchronization, said means for synchronizing coupled to said means for generating; and

means for running said means for generating and said means for synchronizing, said means for running coupled to said means for containing.

12. The system of claim 11 wherein said means for generating further comprises:

first means for identifying whether a mail message or folder in a given mail box is a duplicate of a corresponding mail message or folder in a modified mail box by using the contents of individual attributes of said mail message or folder; and

second means for identifying said duplicate which was not identified by said first means for identifying.

13. The system of claim 11 wherein said means for synchronizing further comprises means for correctly identifying a mail message or folder to update or delete without requiring said mail message or folder in said first and second set of mail to contain system assigned unique identifiers.

14. A method for synchronizing a first set of mail with a second set of mail at a mail message or folder level, said method comprising the steps of:

generating a change list for said first and second sets of mail, said change list listing the changes made at a mail message or folder level to said first and second sets of mail; and

synchronizing said first set of mail with said second set of mail using said first change list generated for said first set of mail and said second change list generated for said second set of mail, said step of synchronizing producing the same synchronization results regardless of whether one or both of said first and second sets of mail are modified prior to synchronization.

15. The method of claim 14 wherein said step of generating further comprising the steps of:

identifying whether a mail message or folder in a given mail box is a duplicate of another mail message or folder in a modified mail set, said first set of mail and said second set of mail being said given mail box and said first set of mail and said second set of mail with changes being said modified mail box, and

identifying said duplicate which was not identified in said step of identifying whether said message or folder is a duplicate.

16. The method of claim 14 wherein said step of synchronizing further comprising the step of changing mail messages or folders in said first set of mail and mail messages or folders in said second set of mail for synchronizing mail messages or folders in said first set of mail and said second set of mail.

**WEST**

Generate Collection

Print

L2: Entry 55 of 62

File: USPT

May 26, 1998

US-PAT-NO: 5758354

DOCUMENT-IDENTIFIER: US 5758354 A

TITLE: Application independent e-mail synchronization

DATE-ISSUED: May 26, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huang; Chu-Yi	Beaverton	OR		
Tso; Michael Man-Hak	Hillsboro	OR		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Intel Corporation	Santa Clara	CA			02

APPL-NO: 08/ 579949 [PALM]

DATE FILED: December 28, 1995

## PARENT-CASE:

RELATED ART This application is a continuation in part under 37 CFR 1.53 of prior filed pending application Ser. No. 08/431,500 entitled APPLICATION INDEPENDENT RECORD LEVEL SYNCHRONIZATION is now allowed.

INT-CL: [06] G06 F 17/30

US-CL-ISSUED: 707/201; 395/182.18, 395/670, 395/676, 395/680

US-CL-CURRENT: 707/201; 709/100, 709/106, 714/20

FIELD-OF-SEARCH: 395/617, 395/650, 395/670, 395/676, 395/680, 395/182.18, 707/201, 707/200

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4551842</u>	November 1985	Segarra	371/69
<input type="checkbox"/>	<u>4807248</u>	February 1989	Pyatt et al.	375/1
<input type="checkbox"/>	<u>4875159</u>	October 1989	Cary et al.	364/200
<input type="checkbox"/>	<u>5377354</u>	December 1994	Scannell et al.	395/650
<input type="checkbox"/>	<u>5592664</u>	January 1997	Starkey	395/600

ART-UNIT: 271

PRIMARY-EXAMINER: Lintz; Paul R.

ASSISTANT-EXAMINER: Corrielus; Jean M.

ABSTRACT:

A method and an apparatus for synchronization of a first set of mail with a second set of mail at the message/folder level. A memory stores a mail synchronizer for application independent e-mail synchronization. A pseudo unique identification is generated for each message or folder in the mail boxes to be synchronized. An event log is then generated for each mail box. The memory also has a synchronization mechanism for making the first set of data and the second set of data equivalent by using the information in a Change List. A processor runs the mail synchronizer.

16 Claims, 42 Drawing figures